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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/780,798

02/18/2004

Floyd Backes

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34845

7590

09/08/2006

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EXAMINER

HOLLIDAY, JAIME MICHELE

ART UNIT

PAPER NUMBER

2617

DATE MAILED: 09/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/780,798	Applicant(s) BACKES, FLOYD	
	Examiner Jaime M. Holliday	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 29, 2006 has been entered.

Response to Arguments

2. Applicant's arguments with respect to **claims 1-3** have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. **Claims 1 and 3** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kallio (Pub # U.S. 2004/0014422 A1)** in view of **Bhatoolaul et al. (U.S. Patent # 6,788,940 B2)**, and in further view of **Feder et al. (U.S. Patent # 6,522,881 B1)**.

Consider **claim 1**, Kallio clearly shows and discloses a system for handovers implemented in a Bluetooth environment, which defines a short-range radio network, reading on the claimed "Dynamic Radio Control Protocol," (paragraphs 4 and 13). Kallio further discloses a system that enables terminal devices to efficiently transition from a first access point to a second access point based on service discovery information that is transmitted by the second access point. The current access point establishes a link with the terminal device; sends service description data to the terminal device; and authenticates the link with the second access point using a group key based on the service description data, reading on the claimed "Dynamic Radio Control Protocol for use by devices in a wireless communications environment wherein multiple channels are available for communication," (paragraphs 13 and 15), comprising:

a terminal device **402** enters a page scan state, where it awaits one or more paging messages. An access point **406** also enters a paging mode and transmits one or more paging packets. These paging packets each include an identification number based on the address of terminal device. Meanwhile, during this step, the terminal device, which is in page scan mode, responds to the paging packets by transmitting a packet that includes its address, reading on the claimed "exchange of Announce messages between devices, wherein some devices send Announce messages to indicate their presence and their protocol capability to other devices; exchange of Bid messages between devices, wherein a sending device sends a Bid message to a receiving device to indicate that the sending device desires to communicate in the wireless communications environment via the receiving device," (figures 8 and 10, paragraphs 134-135);

an access point receives this packet from terminal device. In response, access point transmits a frequency hop synchronization (FHS) packet. The FHS packet is used to pass information that allows terminal device to synchronize with the frequency hopping sequence of access point. Upon receipt of this FHS packet, terminal device transmits a further packet to confirm receipt of the FHS packet. Both terminal device and access point enter into the connection state at this point, reading on the claimed "exchange of Accept messages between devices, wherein a sending device sends an Accept message to a receiving device in response to a Bid message to indicate that the sending device will allow the receiving device to communicate in the wireless communications

environment via the sending device and wherein the sending device does not send an Accept message to the receiving if the sending device determines to not accept a bid from the receiving device,” (figures 8 and 10, paragraphs 134-135).

However, Kallio does not specifically disclose an exchange of messages prior to the packets sent during the page scan, which would read on the “Claim messages.”

In the same field of endeavor, Bhatoolaul et al. clearly show and disclose a cellular mobile telephone network, wherein a mobile station requests service in data modulated on a common random access channel (RACH) in a format associated with first a cell in which the mobile station is located, and wherein base stations in cells neighboring the first cell, are configured to demodulate the RACH message burst having the format associated with the first cell, and to pass the demodulated data to a radio network controller (RNC), which enables the average power required for a successful RACH transmission to be reduced. The data is sent in separate preamble and message bursts, reading on the claimed “claim messages;” and a radio network controller (RNC) is responsive to receipt of the preamble burst, to instruct base stations in the neighboring cells to demodulate the RACH message burst having the format associated with the first cell, and to pass the demodulated data to a radio network controller (RNC), (col. 1 lines 48-65). The mobile station may be operative to compare the signal strengths of transmissions received from different base stations to determine whether or not it is in a handover region, and to send RACH data with one of a

reserved set of physical channel attributes if the base station is in the handover region, reading on the claimed "announce messages to indicate presence, transmission power attenuation, and their protocol capability," (col. 2 lines 8-13). This invention enables a reduction in the average power required for a successful RACH transmission in a CDMA cellular system, thereby improving either the potential RACH coverage range or up link (UL) capacity. The UL RACH access burst in any cellular system has to perform two key functions. Firstly it has to notify (similar in concept to a beacon) the BTS of the presence of a mobile wishing gain access to the network. Secondly it must convey sufficient information to the network, so that the network can identify the mobile requesting access, the service mode that the mobile wishes to enter and potentially also the quality of the DL channel, reading on the claimed "exchange of Claim messages between devices, each Claim message being indicative of an intent to utilize a channel for communications with associated devices at some subsequent point in time, wherein each device uses the claim messages it sends and receives to select a channel on which to communicate," (col. 2 lines 56-67).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide a RACH message that notifies the presence of a mobile station to a network as taught by Bhatoolaul et al. in the system of Kallio in order to make handovers more efficient (paragraph 14).

However, Kallio, as modified by Bhatoolaul et al., does not specifically disclose that the paging packets are transmitted, because the terminal device has an indication that the access point is capable of providing better service.

In the same field of endeavor, Feder et al. clearly show and disclose a method and apparatus for use in a wireless communications network that searches for the best serving access point of a base station as a function of communication quality. Each base station **200** includes five access points (AP) that are assigned a different 1MHz channel, reading on the claimed "devices in a wireless communications environment wherein multiple channels are available for communication," (abstract, column 4 lines 6-11). A wireless modem **270** in a fixed wireless network executes an AP search/selection sequence in response to a triggering event, such as when service quality degrades below a threshold level. After detecting beacons and obtaining a communication link quality metric for each neighboring access point, the wireless modem selects the best access point based on the communication link quality metric, reading on the claimed "a decision to send a bid message is based at least in-part on an indication that the receiving device is capable of providing better service," (column 2 lines 59-63, column 3 lines 6-10).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to select an access point with the best communication link quality as taught by Feder et al. in the system of Kallio, as

modified by Bhatoaul et al., in order to efficiently complete a transition or handover.

Consider **claim 3**, and **as applied to claim 1 above**, Kallio, as modified by Bhatoaul et al., clearly show and disclose the claimed invention, except that chooses the access point that will provide better wireless communications performance than the current access point.

In the same field of endeavor, Feder et al. clearly show and disclose a method and apparatus for use in a wireless communications network that searches for the best serving access point of a base station as a function of communication quality. Each base station **200** includes five access points (AP) that are assigned a different 1MHz channel, reading on the claimed "devices in a wireless communications environment wherein multiple channels are available for communication," (abstract, column 4 lines 6-11). A wireless modem **270** in a fixed wireless network executes an AP search/selection sequence in response to a triggering event, such as when service quality degrades below a threshold level. After detecting beacons and obtaining a communication link quality metric for each neighboring access point, the wireless modem selects the best access point based on the communication link quality metric, reading on the claimed "Bid message is sent by a sending device to a receiving device if the sending device ascertains that the receiving device is likely to provide better wireless communications performance than another device through which the sending device is currently communicating," (column 2 lines 59-63, column 3 lines 6-10).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to select an access point with the best communication link quality as taught by Feder et al. in the system of Kallio, as modified by Bhatoolaul et al., in order to efficiently complete a transition or handover.

6. **Claim 2** is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of **Kallio (Pub # U.S. 2004/0014422 A1)** and **Bhatoolaul et al. (U.S. Patent # 6,788,940 B2)** in view of **Feder et al. (U.S. Patent # 6,522,881 B1)**, and in further view of **Idnani et al. (Pub # U.S. 2004/0121765 A1)**.

Consider **claim 2**, and as applied to **claim 1 above**, the combination of Kallio and Bhatoolaul et al., as modified by Feder et al., clearly shows and discloses the claimed invention except that a registration request message and its acknowledgement are transmitted.

In the same field of endeavor, Idnani et al. clearly show and disclose a Session Initiation Protocol (SIP) proxy user agent (UA) to serve as a gateway between a SIP core network and a SIP-unaware mobile. A new message is described, a combined registration and event subscription message, which is used by SIP proxy UAs to both register a new contact address for a mobile and to subscribe to the mobile's contact information. When mobile station (MS) **101** begins obtaining service from base station (BS) **111** it sends a registration request message to SIP component **120**. This registration request message **202**

is not a SIP message, but rather a registration message in accordance with the wireless protocol utilized by MS. The registration request message is received by SIP proxy UA **123**, via the wireless network interface **121**. Acting as a proxy user agent for the mobile station, SIP proxy UA then sends a combined registration and event subscription message for MS 101 to SIP registrar/presence server **130**, reading on the claimed "access point." Proxy UAs are responsible for translating the call control messaging between SIP and the appropriate wireless protocol, reading on the claimed "exchange of registration request messages between devices, wherein a sending device sends a registration request message to a receiving device to indicate that the sending device desires to communicate in the wireless communications environment via the receiving device using the Dynamic Radio Control Protocol," (figures 1 and 2, paragraphs 8, 14-15);

In response to the message, SIP registrar sends SIP OK message to SIP proxy UA, reading on the claimed "exchange of registration acknowledge messages between wireless devices, wherein a sending device sends a Registration acknowledge message to a receiving device in response to a Registration Request message, to indicate that the sending device understands that the receiving device will communicate in the wireless communications environment using the Dynamic Radio Control Protocol," (figures 1 and 2, paragraph 30).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to register, via a proxy, to a server as taught by Idnani et al. in the system of Kallio and Bhatooolaul et al., as modified by Feder et al., in order to efficiently complete a transition or handover.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jaime M. Holliday whose telephone number is (571) 272-8618. The examiner can normally be reached on Monday through Friday 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on (571) 272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


CHARLES APPIAH
PRIMARY EXAMINER


Jaime Holliday
Patent Examiner